

UNICORE Workflow Management Evaluation Report

May 8, 2013

The TIS team performed an evaluation of the UNICORE workflow management system (WMS).

UNICORE 6 is a client-server Grid middleware system that provides access to distributed Grid resources. UNICORE has many features including job control, workflow submission, and file transfer capabilities. In this evaluation we focused solely on its workflow submission capabilities.

UNICORE can be configured to use a variety of job managers for running workflows. A graphical interface called the UNICORE Rich Client (URC) is provided for building the XML workflow descriptions. We tested workflow creation using the URC and workflow submission from both the command line interface and the URC to XSEDE resources. We tested a variety of use cases and error conditions that would commonly be seen by an XSEDE user.

We found UNICORE met the requirements for running workflows on grid resources and that it works reliably when workflow descriptions are created properly. The evaluation team recommends UNICORE as a viable solution for workflow management.